

ORIGINAL



MEMORANDUM

30

TO: Docket Control

FROM: Ernest G. ⁸⁶⁷Johnson, Director
Utilities Division

DATE: May 30, 2005

RE: STAFF REPORT FOR LAGOON ESTATES WATER COMPANY'S
APPLICATION FOR PERMANENT RATE INCREASE DOCKET NUMBER
W-01825A-04-0546

Attached is the Staff Report for Lagoon Estates Water Company's application for a permanent rate increase.

Originator: James J. Dorf

Attachment: Original and sixteen copies

Arizona Corporation Commission

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Service List for: Lagoon Estates Water Company
Docket No.: W-01825A-04-0546

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**STAFF REPORT
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION**

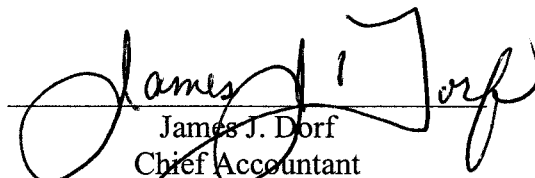
**LAGOON ESTATES WATER COMPANY
DOCKET NO. W-01825A-04-0546**

**APPLICATION FOR A
PERMANENT RATE INCREASE**

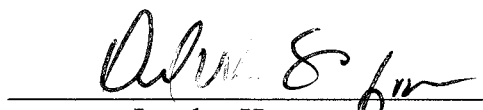
MAY 2005

STAFF ACKNOWLEDGMENT

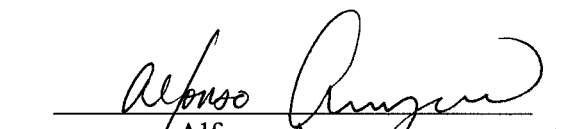
The Staff members responsible for the content of this report are listed below along with their titles and the subject(s) for which each is accountable.



James J. Dorf
Chief Accountant
Analysis of Revenue Requirement,
Rate Base & Rate Design



Lyndon Hammon
Utilities Engineer
Engineering & Technical Analysis



Alfonso Amezcua
Public Utilities Consumer Analyst I
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EXECUTIVE SUMMARY
LAGOON ESTATES WATER COMPANY
DOCKET No. W-01825A-04-0546

Lagoon Estates Water Company ("Company") is an Arizona "S" corporation engaged in the business of providing potable water to approximately 266 customers in an area located near the Colorado River approximately 20 miles south of Bullhead City, in Mohave County, Arizona.

Staff recommends rates that would increase total revenues by \$20,136, or 18.8 percent, over the test year to \$127,000. Staff's recommended rates would increase the typical residential bill with a median usage of 5,610 gallons from \$21.47 to \$27.66, an increase of \$6.19 or 28.8 percent.

The Company proposed rates that would increase total revenues by \$26,331, or a 24.6 percent, to \$133,195. The Company's proposed rates would increase the typical residential bill with a median usage of 5,610 gallons from \$21.47 to \$29.83, an increase of \$8.36 or 38.9 percent.

The Company is in compliance with the Arizona Department of Environmental Quality ("ADEQ") water testing requirements. The Company is not in compliance with the Environmental Protection Agency ("EPA's") new maximum contaminant level of 10 parts per billion for arsenic in potable water for one of its two separate systems. The Company is currently evaluating its arsenic treatment options and requests inclusion of an Arsenic Remediation Surcharge Mechanism in its rates.

Staff recommends approval of its rates and charges as presented on Schedule JJD-4 and the Arsenic Remediation Surcharge Mechanism described herein subject to certain conditions.

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Engineering Report
Consumer Services Report

FACT SHEET

Current Rates: Decision No. 62508, dated May 4, 2000, rates effective May 1, 2000.

Type of Ownership: Arizona Sub-Chapter S Corporation.

Location: The Company serves customers in Mohave County approximately 20 south of Bullhead City, Arizona.

Rates: Permanent rate increase application filed July 28, 2004, and amended September 9, 2004.

Current Test Year: December 31, 2003.

Proposed Rates

	<u>Company Current</u>	<u>Company Proposed</u>	<u>Staff Recommended</u>
Monthly Minimum Charge (5/8 X 3/4" meter)	\$12.25	\$16.00	\$15.00
Gallons in Minimum	1,000	-0-	-0-
Commodity Charge:			
All gallons over 1,000	\$2.00	\$3.00	
Tier one – one to 3,000 gallons			\$2.00
Tier two – 3,001 gallons to 10,000 gallons			\$2.55
Tier three – all gallons over 10,000 gallons			\$3.25
Typical residential bill (median of 5,160 gal.)	\$21.47	\$29.83	\$27.66

Customers: Average number of customers in prior test year, 230; current test year, 258.

Notifications: Customer Notification was mailed on June 7, 2004.

Complaints: Number of customer concerns since application filed: one complaint (resolved), no inquiries, and two opinions (one quality of service and one opposed to the proposed rate increase).

Summary of Filing

The test year, as adjusted by the Utilities Division Staff ("Staff"), provided Lagoon Estates Water Company ("Company") an operating income of \$3,485 on an original cost rate base ("OCRB") of \$159,335.

Staff recommends rates that would increase total revenues by \$20,136, or 18.8 percent, over the test year to \$127,000. Staff's recommended rates would increase the typical residential bill with a median usage of 5,610 gallons from \$21.47 to \$27.66, an increase of \$6.19 or 28.8 percent.

The Company proposed rates that would increase total revenues by \$26,331, or 24.6 percent, to \$133,195 to provide an operating income of \$14,837 and an operating margin of 11.1 percent. The Company's proposed rates would increase the typical residential bill with a median usage of 5,610 gallons from \$21.47 to \$29.83, an increase of \$8.36 or 38.9 percent.

Company Background

On July 28, 2004, the Company filed an application for a permanent rate increase with the Arizona Corporation Commission ("Commission"). On August 26, 2004, the Company's filing was found deficient. Subsequently, the Company satisfied the deficiencies and the application was deemed sufficient on October 8, 2004.

On December 16, 2004, the Company requested, and was subsequently granted, a waiver of the time clock for its rate filing to permit the gathering of estimates of the costs to reduce the level of arsenic to the new United States Environmental Protection Agency ("EPA") standard of 10 parts per billion. The Company also requested an Arsenic Remediation Surcharge Mechanism ("ARSM").

The Company indicated that increases in operating expenses for water testing, employee wages, employee training, outside services, and system maintenance caused the need for a rate increase.

Consumer Services

The Commission's records show the following customer complaints and opinions for the period 2001 through March 28, 2005:

- One inquiry in 2002 related to quality of service.
- Two opinions in 2004 – one related to quality of service and one opposed to the proposed rate increase.
- One complaint to date in 2005 – a billing issue since resolved to the satisfaction of the customer.

Compliance

The Utilities Division Compliance Section reports no outstanding compliance issues. The Company is current in its property and sales tax payments.

The Company filed a curtailment tariff with this rate filing, and Staff accepts the proposed tariff as it complies with the recommended language and conditions.

Based on data submitted by the water system, the Arizona Department of Environmental Quality ("ADEQ") reports no deficiencies and determined that the Company's system is currently delivering water that meets the water quality standards required by Arizona Administrative Code, Title 18, Chapter 4.

The Company operates two separate water delivery systems, System Nos. 08-021 (226 customers) and 08-046 (40 customers). The Company reported its arsenic concentrations for System Nos. 08-021 at 3 ppb and 08-046 at 14 ppb. The Company is currently investigating its treatment options for reducing the arsenic level for system 08-046.

Decision No. 62508 required the Company to install a meter on an irrigation line. The Company has changed the irrigation water source to a metered sprinkler system.

Rate Base

Staff calculated an original cost rate base ("OCRB") of \$159,335 (Schedule JJD-2). The Company waived its right to determine reconstruction cost new less depreciation rate base.

Plant-in-Service

Staff made no adjustments to plant-in-service because all plant and equipment is deemed to be used and useful and properly recorded.

Accumulated Depreciation

Staff adopted test year depreciation rates as being adequate. An update of depreciation rate is not recommended because the plant is substantially depreciated.

Operating Revenue

Staff made no adjustments to metered revenue. Application of the existing rates to the bill counts submitted in the application provides a result that matches the test year revenue in the filing.

Operating Expenses

Staff adjustments resulted in a \$8,687 net increase to test year operating expenses. Each adjustment is described on Schedule JJD-4. The primary reason for the increase to operating expenses is a pro forma to include \$600 per month for accounting, office space, personnel and customer billing services provided by Sherrill Farms. The cost of \$600 per month appears reasonable based on the services provided.

Revenue Requirement

Staff's recommended revenue of \$127,000, an increase of \$20,086 or 18.8 percent, over test year revenue of \$106,914, would provide an operating income of \$17,913 for an 11.24 percent rate of return on a rate base of \$159,335 and an operating margin of 14.1 percent. Staff's recommended revenue is \$6,195 less than the Company's request of \$133,195.

Capital Structure

In Decision No. 62508, the Company was ordered to file applications for approval of then existing loans, as required by Commission rules, before the Company's next rate application. The financial statements dated December 31, 2003, reflect \$12,231 for "Note Payable-Current Portion." Staff reclassified the \$12,231 to Owner's Capital. The resulting capital structure consists solely of Owner's Capital of \$149,892.

Rate Design

Application of the Company's proposed rates to the end of test period customer billing determinants produces revenue of \$133,120. The proposed rates would increase the average customer's median bill by 38.9 percent. The Company proposes using a single rate of \$3.00 per 1,000 gallons for all water consumption (no gallons in the minimum charge).

Staff proposes an inverted three-tier rate structure. The break-over points and rates for the recommended tiers were selected to provide an economic incentive for efficient water use. Staff agrees with the Company's proposal to include no gallons in the minimum charge.

The Company requests to change its Service Line and Meter Installation Charges. The Company's proposed charges are within Staff's experience of reasonable and customary charges, accordingly, Staff concurs with the proposed charges.

The Company proposes increases to some Service Charges. Staff recommends its charges as they are consistent with those of other water company service charges recently approved by the Commission.

Arsenic Remediation Surcharge Mechanism

The Company is in the process of finding and evaluating alternative treatment methodologies, including point of use. The Company has applied to the Water Infrastructure Finance Authority ("WIFA") for a \$35,000 Technical Assistance Grant, which if granted will permit a demonstration project to determine the most cost effective treatment method.

The Company requests establishment of an arsenic remediation cost recovery mechanism in this rate proceeding to address costs arising from rules established by the EPA that require a

reduction in the maximum contaminant levels ("MCL") for arsenic in potable water from 50 parts per billion ("ppb") to 10 ppb by January 23, 2006.

As more fully described in the attached Engineering Report, the Company is currently evaluating arsenic removal methodologies for its system No. 08-046. The Company is also evaluating treatment for iron and manganese for both of its systems. The treatment process currently being evaluated would have the added benefit of removing the iron and manganese in addition to reducing the level of arsenic.

A very preliminary estimate provided by one vendor offered the following treatment options and estimated capital costs:

1. A treatment facility (125 gallons per minute) for System No. 08-046 with capital cost of \$325,000.
2. A treatment facility (1,000 gallons per minute) for System No. 08-021 with a capital cost of \$2.3 million.
3. A central treatment facility (350 gallons per minute) with holding tank for both systems with a capital cost of \$1.7 million and does not include the pipeline required from the central site to each system.

Staff agrees that a form of streamlined cost recovery that will enable the Company to recover costs associated with arsenic treatment compliance is appropriate. The Commission has permitted the inclusion of ARSM's such as Decision No. 67163, Mountain Glen Water Service, Inc.

Pending a determination of a final treatment methodology, the Company has not established the method by which the facilities will be financed. It has not yet determined whether it will qualify for a WIFA or other loans. The Commission has approved an Arsenic Remediation Surcharge Mechanism ("ARSM") in Decision No. 67163 (Mountain Glen Water Service, Inc., dated August 10, 2004). An ARSM was established to permit recovery of the financial impact of acquiring and financing new arsenic facilities. The method and amount of the financing required by the Company will be considered when implementing the first phase of the ARSM process discussed below.

Capital or operating costs related to the potential cost of treating for arsenic have not been included in the proposed revenue requirements offered by the Company or Staff. Staff notes that the proposed ARSM process is a variance from normal ratemaking procedures and is intended to benefit customers. The Company always has the option of filing a full rate case if it determines that the step increases proposed by the Staff are insufficient to recover its costs.

For purposes of illustrating the calculation of the ARSM, Staff has estimated costs associated with implementing a Point of Use solution utilizing a typical under sink reverse osmosis ("RO") based on information provided by the Company. The assumptions are noted at

Schedule JJD-7. In addition to other conditions included in Staff's recommendation, the following two phase process should be used to implement an ARSM:

1. The Phase One surcharge calculation method is established wherein:
 - a) The financing costs associated with the required capital costs are amortized over the life of the related borrowing.
 - b) Appropriate operating and maintenance ("O & M") costs will be estimated for the first phase (first twelve month period of operations) and reduced by 50 percent. O & M costs are defined as "media replacement or regeneration costs, media replacement or regeneration service costs, and waste media or regeneration disposal costs."¹
 - c) The first year financing costs and 50 percent of the estimated annual O & M costs will be divided by the number of RO systems, and further divided by 12 to establish the monthly Phase One surcharge amount.
2. The Phase Two surcharge calculation method will be as follows:
 - a) The annual financing costs will remain the same as in Phase One.
 - b) The annual O & M cost will be based on the actual first 12 months of operating the RO systems and will be 100 percent recoverable.
 - c) The Phase Two monthly surcharge will be based on the amount derived in a) and b) above and divided by the number of RO systems, and further divided 12.

Based on preliminary RO costs provided by the Company, the estimated Phase One and Phase Two monthly surcharge amounts are \$10.23 and \$16.48, respectively. Therefore, for those customers with RO systems the typical monthly bill will be \$37.89 in Phase One and \$44.14 in Phase Two. However, RO represents a substantial saving over the preliminary estimate of an \$80 a month increase noted in Staff's Engineering Report.

The Company will be required to separately identify the ARSM on its monthly billing with the following description: "EPA Arsenic Treatment Surcharge".

A primary factor underlying Staff's recommendation for authorizing an ARSM is the potential for arsenic removal costs to have detrimental financial effects to the Company. Likewise, the magnitude of the capital investment and projected annual arsenic operation and maintenance costs warrants consideration for unusual treatment such as establishing a surcharge mechanism.

¹ Decision No. 66400, page 6, lines 19 through 22.

Recommendations

Staff recommends:

- approval of Staff's rates and charges as shown on Schedule JJD-4. In addition to collection of its regular rates and charges, the Company may collect from its customers a proportionate share of any privilege, sales or use tax pursuant to A.A.C.R14-2-409.D.5.
- that the Company docket with the Commission a schedule of its approved rates and charges within 30 days after the Decision in this matter is issued.
- authorization of the curtailment tariff as proposed and that the Company docket this curtailment tariff coincident with the ordered rate tariffs from this rate proceeding.
- adoption of the arsenic remediation surcharge mechanism proposed within this case and a requirement that the ARSM be separately identified on monthly customer billings.
- that the Company docket with the Commission a plan for arsenic treatment that identifies the intended method for financing any capital improvements included in the treatment plan.
- that if the Company's arsenic treatment plan includes obtaining debt financing, it should file concurrently before the Commission an application requesting authorization to incur debt and an application for an arsenic treatment surcharge tariff that would enable it to meet the principle and interest obligations on the proposed debt and income taxes on the surcharge.
- that the Company postpone the selection and purchase or lease of any arsenic treatments facilities or processes until the Commission Staff reviews and approves the selected removal process or arsenic control method.
- that the Company be required to file a general rate application within five years of the implementation of Phase One of the ARSM.

Lagoon Estates Water Company
Docket No. W-01825A-04-0546
Test Year Ended December 31, 2003

Schedule JJD-2

RATE BASE

	Original Cost	
	Company	Staff
Plant in Service	\$485,696	\$485,696
Less:		
Accum. Depreciation	<u>(317,446)</u>	<u>(317,446)</u>
Net Plant	<u>\$168,250</u>	<u>\$168,250</u>
Less:		
Customers Deposits	<u>(20,152)</u>	<u>(20,152)</u>
Subtotal	<u>\$148,098</u>	<u>\$148,098</u>
Plus:		
1/24 Power	\$0	\$330
1/8 Operation & Maint.	0	10,907
Inventory	0	0
Prepayments	<u>0</u>	<u>0</u>
Total Additions	<u>(\$0)</u>	<u>\$11,237</u>
Rate Base	<u>\$148,098</u>	<u>\$159,335</u>

Lagoo Estates Water Company

Docket No. W-01825A-04-0546

Schedule JJD-1

Test Year Ended December 31, 2003

SUMMARY OF FILING

	Present Company as Filed	Proposed Rates	
		Company as Filed	Staff as Adjusted
Revenues:			
Metered Water Revenue	\$96,142	\$133,195	\$126,500
Unmetered Water Revenue	0	0	0
Other Water Revenues	10,722	0	500
Total Operating Revenue	\$106,864	\$133,195	\$127,000
Operating Expenses:			
Operation and Maintenance	\$95,979	\$95,979	\$87,592
Depreciation	14,761	14,761	14,761
Property & Other Taxes	7,628	7,628	6,734
Total Operating Expense	\$103,379	\$118,368	\$109,087
Operating Income/(Loss)	\$3,485	\$14,827	\$17,913
Rate Base O.C.L.D.	\$159,335	\$159,335	\$159,335
Rate of Return - O.C.L.D.	2.19%	9.31%	11.24%
Operating Margin	3.26%	11.13%	14.10%

STATEMENT OF OPERATING INCOME

	Company Test Year	Staff Adjustment	Staff Adjusted
Revenues:			
461 Metered Water Revenue	\$96,142	\$30,358	\$126,500
460 Unmetered Water Revenue	0	0	0
474 Other Water Revenues	10,772	(10,272)	500
Total Operating Revenue	\$106,914	\$20,086	\$127,000
Operating Expenses:			
601 Salaries and Wages	\$35,082	\$918 A	\$36,000
610 Purchased Water	0	0	
615 Purchased Power	7,916	0	7,916
618 Chemicals	518	1,309 B	1,827
620 Repairs and Maintenance	6,496	0	6,496
621 Office Supplies & Expense	2,450	0	2,450
630 Outside Services	848	7,200 C	8,048
635 Water Testing	1,870	730 D	2,600
641 Rents	158	(158) E	0
650 Transportation Expenses	2,440	0	2,440
657 Insurance - General Liability	6,918	(2,918) F	4,000
659 Insurance - Health and Life	0	0	0
666 Regulatory Commission Expense - Rate Case	0	0	0
675 Miscellaneous-Utilities Expense	10,275	0	10,275
403 Depreciation Expense	14,761	0	14,761
408 Taxes Other Than Income	3,040	2,500 G	5,540
408.11 Property Taxes	7,628	(894) H	6,734
409 Income Tax	0	0	0
Total Operating Expenses	\$100,400	\$8,687	\$109,087

OPERATING INCOME/(LOSS)	\$6,514	\$11,399	\$17,913
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Other Income/(Expense):

419 Interest and Dividend Income	\$0	\$0	\$0
421 Non-Utility Income	0	0	0
427 Interest Expense	(2,979)	2,979 I	0
4XX Reserve/Replacement Fund Deposit	0	0	0
426 Miscellaneous Non-Utility Expense	0	0	0

Total Other Income/(Expense)	(\$2,979)	\$2,979	\$0
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NET INCOME/(LOSS)	\$3,535	\$14,378	\$17,913
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STAFF ADJUSTMENTS

A	SALARIES AND WAGES - Per Company	\$35,082	
	Per Staff	36,000	\$918
	To annualize year end salaries.		
B	CHEMICALS - Per Company	\$518	
	Per Staff	1,827	\$1,309
	To normalize cost using a three year average.		
C	OUTSIDE SERVICES - Per Company	\$848	
	Per Staff	8,048	\$7,200
	To provide for reimbursement of services provided by Sherrill Farms for accounting and customer billing.		
D	WATER TESTING - Per Company	\$1,870	
	Per Staff	2,600	\$730
	To adjust to Staff's recommended water testing requirement.		
E	RENTS - Per Company	\$158	
	Per Staff	0	(\$158)
	To eliminate non-recurring rent charge.		
F	INSURANCE - Per Company	\$6,918	
	Per Staff	4,000	(\$2,918)
	To eliminate prepaid insurance premium.		
G	TAXES OTHER THAN INCOME - Per Company	\$3,040	
	Per Staff	5,540	\$2,500
	To adjust to Staff's calculated payroll & franchise tax amount.		
H	PROPERTY TAXES - Per Company	\$7,628	
	Per Staff	5,800	(\$1,828)
	To adjust to Staff's calculated property tax amount.		
I	INTEREST EXPENSE - Per Company	\$2,979	
	Per Staff	0	(\$2,979)
	To eliminate interest expense due to reclassification of debt to equity.		

PROPOSED RATES

Monthly Usage Charge	Present	-Proposed Rates-	
	Rates	Company	Staff
<u>5/8" x 3/4" Meter</u>	\$12.25	\$16.00	\$15.00
3/4" Meter	18.50	25.00	20.25
1" Meter	30.00	40.00	35.00
1½" Meter	61.00	80.00	65.00
2" Meter	98.00	127.00	108.00
3" Meter	185.00	240.00	190.00
4" Meter	305.00	400.00	325.00
6" Meter	612.00	800.00	625.00
8" Meter	708.75	925.00	825.00
Gallons Included in Minimum	1,000	0	0
<u>Commodity Rates</u>			
<u>5/8 x 3/4 Inch Meter</u>			
Over 1,000 gallons	2.00		
Tier one - zero gallons to 3,000 gallons	2.00	3.00	2.00
Tier two - 3,001 gallons to 10,000 gallons	2.00	3.00	2.55
Tier three - all gallons over 10,000 gallons	2.00	3.00	3.25
<u>1 Inch Meter</u>			
Tier one - zero gallons to 10,000 gallons	2.00	3.00	2.55
Tier three - all gallons over 10,000 gallons	2.00	3.00	3.25
<u>2 and 8 Inch Meter</u>			
Tier one - zero gallons to 30,000 gallons	2.00	3.00	2.55
Tier two - all gallons over 30,000 gallons	2.00	3.00	3.25
<u>Service Line and Meter Installation Charges</u>			
<u>5/8" x 3/4" Meter</u>	\$350.00	\$455.00	\$455.00
3/4" Meter	390.00	500.00	500.00
1" Meter	450.00	585.00	585.00
1½" Meter	685.00	890.00	890.00
2" Meter	1,100.00	1,430.00	1,430.00
3" Meter	1,500.00	1,950.00	1,950.00
4" Meter	2,400.00	3,120.00	3,120.00
6" Meter	4,300.00	5,600.00	5,600.00
8" Meter	6,600.00	8,580.00	8,580.00

PROPOSED RATES
CONTINUED

Service Charges

Establishment	\$30.00	\$40.00	\$30.00
Establishment (After Hours)	35.00	60.00	40.00
Reconnection (Delinquent)	n/a	45.00	30.00
Meter Test	30.00	40.00	30.00
Deposit	*	*	*
Deposit Interest	*	*	*
Re-Establishment (Within 12 Months)	**	**	**
NSF Check	20.00	30.00	25.00
Deferred Payment	***	***	***
Meter Re-Read (If Correct)	18.00	23.00	23.00
Late Fee			*

* Per Commission Rules (R14-2-403.B)

** Months off system times the minimum (R14-2-403.D)

*** 1.5% per month.

TYPICAL BILL ANALYSIS

General Service 5/8 X 3/4 - Inch Meter

Average Number of Customers: 261

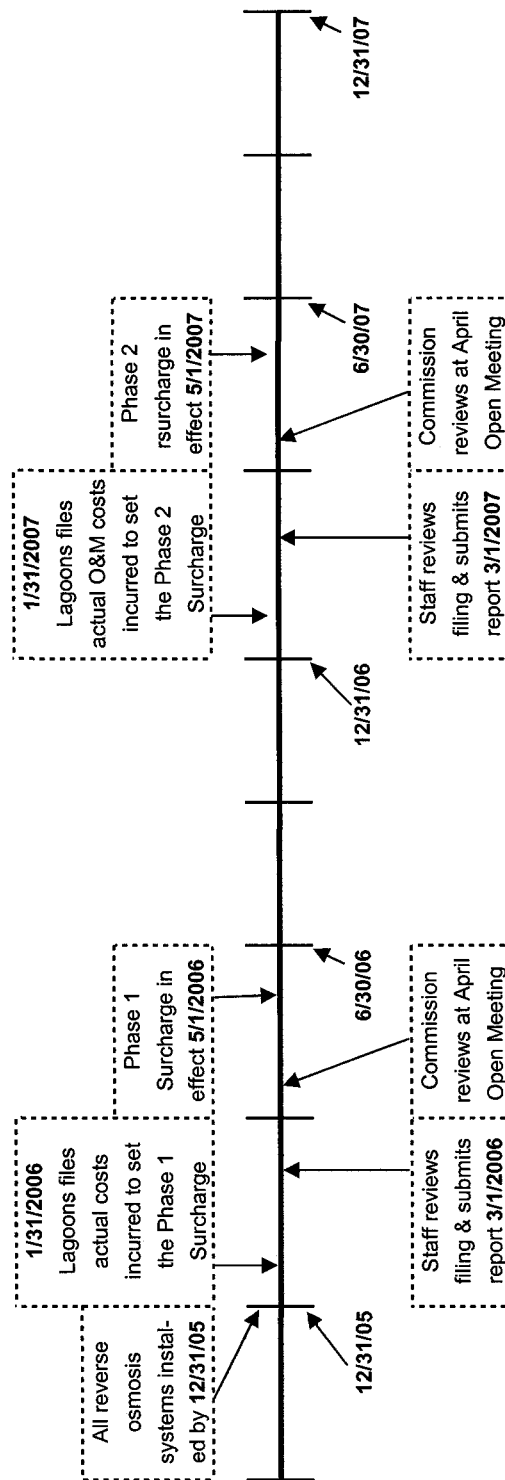
<u>Company Proposed</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	7,150	\$24.55	\$34.45	\$9.90	40.3%
Median Usage	5,610	\$21.47	\$29.83	\$8.36	38.9%
<u>Staff Proposed</u>					
Average Usage	7,150	\$24.55	\$31.58	\$7.03	28.6%
Median Usage	5,610	\$21.47	\$27.66	\$6.19	28.8%

Present & Proposed Rates (Without Taxes) General Service 5/8 X 3/4 - Inch Meter

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$12.25	\$16.00	30.6%	\$15.00	22.4%
1,000	12.25	16.00	30.6%	17.00	38.8%
2,000	14.25	19.00	33.3%	19.00	33.3%
3,000	16.25	22.00	35.4%	21.00	29.2%
4,000	18.25	25.00	37.0%	23.55	29.0%
5,000	20.25	28.00	38.3%	26.10	28.9%
6,000	22.25	31.00	39.3%	28.65	28.8%
7,000	24.25	34.00	40.2%	31.20	28.7%
8,000	26.25	37.00	41.0%	33.75	28.6%
9,000	28.25	40.00	41.6%	36.30	28.5%
10,000	30.25	43.00	42.1%	38.85	28.4%
15,000	40.25	58.00	44.1%	55.10	36.9%
20,000	50.25	73.00	45.3%	71.35	42.0%
25,000	60.25	88.00	46.1%	87.60	45.4%
50,000	110.25	163.00	47.8%	168.85	53.2%
75,000	160.25	238.00	48.5%	250.10	56.1%
100,000	210.25	313.00	48.9%	331.35	57.6%
125,000	260.25	388.00	49.1%	412.60	58.5%
150,000	310.25	463.00	49.2%	493.85	59.2%
175,000	360.25	538.00	49.3%	575.10	59.6%
200,000	410.25	613.00	49.4%	656.35	60.0%

Lagoon Estates Water Company
 Docket No. W-01825A-04-0546
 Test Year Ended December 31, 2003

**ARSENIC REMEDIATION SURCHARGE MECHANISM
 POSSIBLE TIMING OF REQUIRED FILINGS**



ASSUMES NEW RATES ARE IN EFFECT 7-1-05 IN DOCKET W-01825A-04-0546

Capital Costs

Reverse Osmosis Units (Installed) 45 @ \$500	\$22,500
Materials Inventory (2 R.O. units and filters)	\$2,500
Total Estimated Capital Costs	<u>\$25,000</u>

Operating Costs

Estimate approximately \$150 per year for each of the 45 R.O. units (filters changed twice annually)	<u>\$6,750</u>
--	----------------

Surcharge Calculation

Financing Assumption

WIFA loan at 6% interest with a 20 year amortization

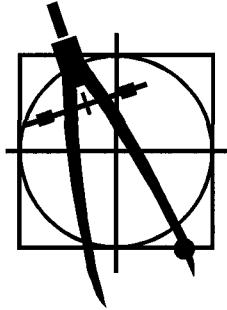
Loan Amount	<u>\$25,000</u>
Annual Principal Payment	\$667
Annual Interest Payment	<u>\$1,483</u>
Total Annual Payment	<u>\$2,150</u>

PHASE ONE SURCHARGE

Annual Debt Service Component of Surcharge	\$2,150
Initial Annual Operating Expense Component at 50% of the estimated annual cost of \$6,750	<u>\$3,375</u>
Initial Annual Surcharge Recoverable	<u>\$5,525</u>
Monthly Surcharge per R.O System ($[\$5,525/45]/12$)	<u>\$10.23</u>

PHASE TWO SURCHARGE

Annual Debt Service Component of Surcharge	\$2,150
Annual Operating Expense Component of the estimated annual cost of \$6,750	<u>\$6,750</u>
Initial Annual Surcharge Recoverable	<u>\$8,900</u>
Monthly Surcharge per R.O System ($[\$8,900/45]/12$)	<u>\$16.48</u>



**Engineering Report
For
LAGOON ESTATES
Water Company
Docket No. W-01825A-04-0546
(Rates)**

CONCLUSION

The Arizona Department of Environmental Quality reported that Lagoon Estates Water Company is delivering water which meets the water quality standards required by the Arizona Administrative Code, Title 18 Chapter 4.

RECOMMENDATIONS

- I. Water testing expenses are based upon participation in the DEQ Monitoring Assistance Program. Annual testing expenses should be adjusted to the level described in Table III (\$ 2,580).
- II. Staff accepts the Company's proposed curtailment tariff and recommends that the Company file its proposed curtailment tariff coincident with the ordered rate tariffs from this rate proceeding, or, as an alternative, file the curtailment tariff within 45 days after the effective date of any decision and order pursuant to this application.
- III. Staff recommends the adoption of the Company's proposed meter and service line charges.
- IV. Staff recommends the adoption of an arsenic cost recovery mechanism for the Company within this rate case. However, Staff recommends postponing the selection and purchase of the process equipment until the Commission Staff reviews and approves the selected arsenic removal process or arsenic control method. For further discussion and details of the arsenic circumstances, please refer to § C of this report.

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EXHIBITS

CERTIFICATED AREA AND LOCATION OF COMPANYEXHIBIT 1

PROCESS SCHEMATICS.....EXHIBITS 2A, & 2B

A. LOCATION OF COMPANY

Lagoon Estates Water Company (herein also "Company") serves about 265 customers in the South Mohave Valley area. The Company is located near the Colorado River, about 20 miles south of Bullhead City, and about 12 miles north of Golden Shoes and the Topock marsh. Figure 1 shows the certificated area and the location of the water systems.

B. PLANT IN SERVICE

The plant facilities were visited by Lyndon Hammon on October 19th, 2004, in the accompaniment of Ms. Karen Brereton, the on-site manager of the water company.

The water company consists of two separate water systems approximately one mile apart (Department of Environmental Quality Identification Number 08-021 and 08-046). System #08-021 consists of two well sites, designated, "Unit 4" and "Unit 7". The Unit 4 well site has two submersible pumps, which are installed in the same well casing. Unit 7 has a vertical turbine pump, with a standby power source. Both wells pump directly to the distribution system through pressure tanks. System #08-021 has approximately 225 customers.

System #08-046 consists of two wells at one site. Both wells pump directly to the distribution system through a pressure tank. System #08-046 has approximately 40 customers.

Exhibits 2A and 2B provide process schematics for the existing water systems. Table I provides a summary of the facilities at each well site.

The water systems have adequate well production (quantities) and comply with the DEQ storage rule because they are multiple sources. Table II contains a summary of the demand and supply performance.

The groundwater in this area is characterized by high concentrations of iron and manganese. The Company treats the water with "Aqua Mag", which is a trade name for a polymerized sodium meta-phosphate sequestering agent. The Aqua-Mag ties up the iron and manganese to inhibit adverse reactions, but does not remove the iron and manganese. The Company also has a program of routine flushing in order to remove any precipitated iron and manganese in the distribution system.

Table I - Facility Summary

PWS ID Number	08-021			08-046	
ADWR ID No.	55-618835 (2 pumps in one well casing)		55-536722	55-618836	55-618837
Horsepower	7.5 Hp	3.5 Hp	40 Hp	7.5 Hp	5 HP
Capacity	500 gal/min	90 gal/min	1500 gal/min	300 gal/min	300 gal/min
Pump Type	submersible	submersible	vertical turbine	submersible	Submersible
Disinfection	yes	yes	Yes	yes	Yes
Well meter	yes	yes	Yes	yes	Yes
Storage	none, multiple sources			none, multiple sources	
Pressure tanks	5,000 gallon		two, 5,000 gallon tanks	5,000 gallon	
Arsenic	3 µg/l		3 µg/l	14 µg/l	
Customers	225			40	

Table II – System Performance

System ID	08-021	08-046
Days in peak month	31	30
Peak month use	2,507,820 gal	391,800 gal
Customers in peak month	219	40
Customers end of year	226	40
Peak day demand	104,354 gal	16,325 gal
Peak day demand / service	476 gal/day-service	408 gal/day-service
Peak day production	3,009,600 gal	864,000 gal
Fire flow	1 hr @ 500 gal/min	1 hr @ 500 gal/min
Production needed	0 gal/min	0 gal/min
Storage needed	0 gal	0 gal
Additional connections based on storage	1,993	1,191
Additional connections based on well production	6,292	2,077

C. ARSENIC

The U.S. Environmental Protection Agency ("EPA") has reduced the arsenic maximum contaminant level ("MCL") in drinking water from 50 micrograms per liter (" $\mu\text{g/l}$ ") to 10 $\mu\text{g/l}$. The date for compliance with the new MCL is January 23rd, 2006.

The most recent lab analyses from DEQ indicate that the arsenic concentration in system number 08-021 is 3 $\mu\text{g/l}$ (micrograms per liter) and the arsenic concentration in system number 08-046 is 14 $\mu\text{g/l}$. Based on this sample data, the Company will need to remove arsenic in system number 08-046.

The Company plans to use a fixed media adsorption process and has begun soliciting bids for the treatment equipment. The iron and manganese content in both systems is high enough to cause aesthetic problems with taste and staining of fixtures. The iron precipitates as iron oxide (red) and the manganese precipitates as manganese dioxide (black). The treatment process, which the company is exploring, will also have the added benefit of removing the iron and manganese in the high arsenic system. Depending on final costs, the Company is also considering iron and manganese removal for the other system (#08-021).

A very preliminary estimate suggested a project cost of \$ 375,000. While this is not entirely out of line with the very few other arsenic removal projects which the Commission has reviewed, the cost does cause some alarm. If a 20 year amortization and an 8% cost of capital is assumed, then the monthly principal and interest outcome would be about \$80 per service for the 40 customers in the affected water system, although, this impact could be reduced considerably if the capital and operating costs were allocated over the entire customer base of 240 customers.

It is Staff's intention to recommend the adoption of an arsenic treatment recovery mechanism for the Company within this rate case. Certainly Lagoon Estates Water Company and the Arizona Corporation Commission both desire the most efficient, economical, and cost effective project to serve the water customers. However, the potential for very high costs to the water user warrants a close examination and justification for the treatment process and its associated costs. Therefore, Staff recommends postponing the selection and purchase of the process equipment until the Commission Staff reviews and approves the selected arsenic removal process or arsenic control method.

The particular information which would have to be considered in making such a review and approval would include:

1. An itemized list and the itemized cost of the capital equipment. Estimates for any contingencies, permit fees, design, construction management and overhead should be included. Staff realizes that there is presently no water storage at the well site, and that storage, booster pumps, and controls will be needed in addition to any process equipment. This ancillary equipment should be described and included as necessary.

2. A design report should be provided in sufficient detail to properly describe, explain, and justify the type and size of the principal treatment system and components. Growth at this system has historically been low. Would phasing of construction and process equipment be advantageous?
3. Have any other alternatives been examined, and if so what are they? For example, is it cost effective or economically feasible to use the water from system 08-021 and blend, in order to meet the arsenic standard? Are point of use devices feasible? Would DEQ approve the delivery of bottled water to the 40 customers rather than provide centralized treatment?
4. Is it possible to downsize the process equipment and if so, would a significant cost savings be realized? (Some preliminary calculations by Staff suggest that a smaller treatment process might be possible.)

D. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY COMPLIANCE (DEQ)

Based on data submitted by the water system, DEQ has determined that this system is currently delivering water that meets the water quality standards required by Arizona Administrative Code, Title 18, Chapter 4.

E. ARIZONA CORPORATION COMMISSION COMPLIANCE

The previous order required Lagoon Estates to install a meter on an irrigation line. The Company responded by changing the irrigation water source to a metered sprinkler system. The Company also reconfigured the well discharge lines so that any flushing can be metered through existing meters. These changes were again verified by Staff during the October 2004 visit and the piping schematic in Figure 2 A reflects the changes. The Company was deemed in compliance with that provision of the previous order in August of 2000. Non-account water also dropped from 9% to less than 1%, which is a positive indicator of those operational changes. A check with the Utilities Division Compliance Unit showed no other compliance issues.

F. ARIZONA DEPARTMENT OF WATER RESOURCES COMPLIANCE

Lagoon Estates Water Company is not within any Active Management Area, and consequently is not subject to reporting and conservation rules.

G. WATER TESTING EXPENSE

On December 8, 1998, DEQ adopted rules which provide for a monitoring assistance program ("MAP"). The MAP program was fully implemented in 1999. On October 16, 2001, rule amendments were promulgated which changed the fee structure and some sampling protocol. Starting January 1, 2002, water companies began paying a fixed \$250 per year fee, plus an additional fee of \$2.57 per service connection, regardless of meter size for participation in the MAP program. Participation in the MAP program is mandatory for water systems which serve less than 10,000 persons, (approximately 3,300 service connections), and Lagoon Estates is subject to the MAP program.

Water testing costs were calculated, based on the following assumptions:

- MAP will do baseline testing on all parameters except copper, lead, nitrates, and coliform bacteria.
- DEQ testing is performed in 3 year compliance cycles. Therefore, monitoring costs are estimated for a 3 year compliance period and then presented as a *pro forma* expense on an annualized basis.
- Expenses are included for a complete inorganic analysis at each well. This will provide important aesthetic and water quality information for the Company and the consumer (i.e., hardness, salinity, iron, manganese, and alkalinity).
- All monitoring expenses are based on Staff's best knowledge of lab costs and methodology and three points of entry for both water systems.
- The estimated water testing expenses represent a minimum cost based on no "hits", and assumes the Company has qualified for reduced lead and copper sampling. If any constituents were found, then the testing costs would dramatically increase.

Water testing expenses should be adjusted to the annual expense amount shown in the Table III below.

Table III - Water Testing Cost

Monitoring – 3 POU's (Tests per 3 years, unless noted.)	Cost per test	No. of tests per 3 years	Total 3 year cost	Annual Cost
Bacteriological – monthly	\$ 30	72	2160	720
Inorganics (& secondary)	\$275	3	825	275
Nitrates – annual	\$ 40	9	360	120
Lead & Copper	\$ 45	15	675	225
Initial radio-chemical	\$ 55	0	0	0
MAP fees (2003 invoices)				1240
Total				\$ 2,580

H. WATER USE

Water Sold

Based on the information provided by the Company, monthly water use for the year 2003 is presented as Chart 3, on the following page, for each of the two individual water systems. A summary of the high, low and average water use is presented in Table IV below.

Non-account Water

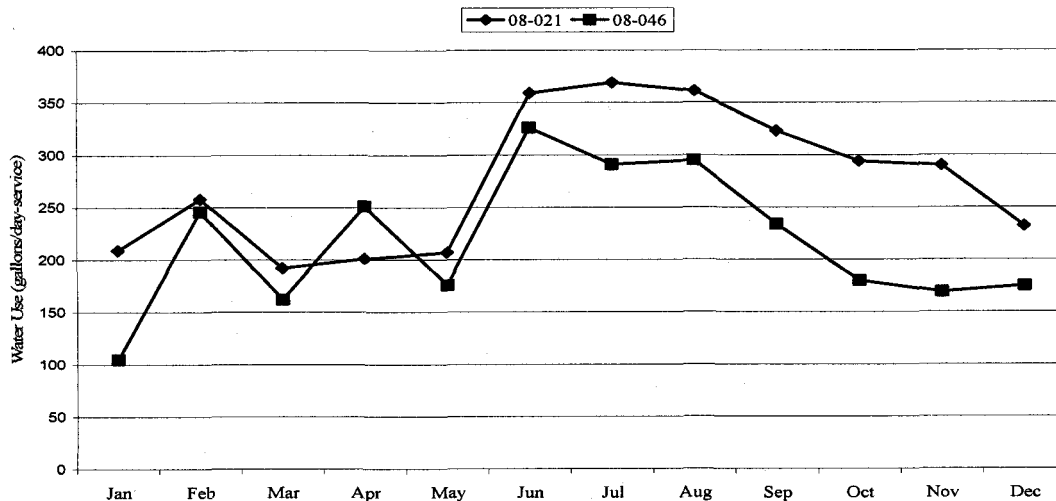
Non-account water should be 10 percent or less and never more than 15 percent. It is important to be able to reconcile the difference between water sold and the water produced by the source. A water balance will allow a water company to identify water and revenue losses due to leakage, theft, and flushing. Since there are two individual water systems, there are two performance values for each individual water system summarized in the table below. Non-account water is presently within acceptable limits for both water systems.

Table IV – Water Use & Losses

System Number	Water Use – Gallons Per Day Per Customer	
	08-021	08-046
Low	192	105
High	369	326
Average	265	217
Non-account water	1 %	1 %

CHART 3

Lagoon Estates Water Company
Water Use 2003



I. GROWTH

In the past, System Number 08-046 has experienced a relatively stable customer base of 40 connections. However, System number 08-021 is experiencing an annual growth rate of about 4.5 %, or about 8 to 10 customers per year. This was the historical growth rate in the 1999 rate case, and it is reasonable to expect this same growth rate in the future.

J. SPECIAL SERVICE TARIFFS

Curtailment Tariff

A curtailment tariff is an effective tool to allow a water company to manage its resources during periods of shortages due to pump breakdowns, droughts, or other unforeseeable events.

Lagoon Estates does not have a curtailment tariff, but has wisely chosen this rate application process to prepare and file such a tariff. The proposed curtailment tariff follows recommended language and conditions. Therefore, Staff accepts the Company's proposed tariff and recommends that the Company file its proposed curtailment tariff coincident with the ordered rate tariffs from this rate proceeding, or file the curtailment tariff within 45 days after the effective date of any decision and order pursuant to this application.

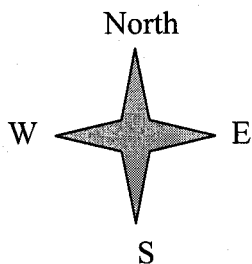
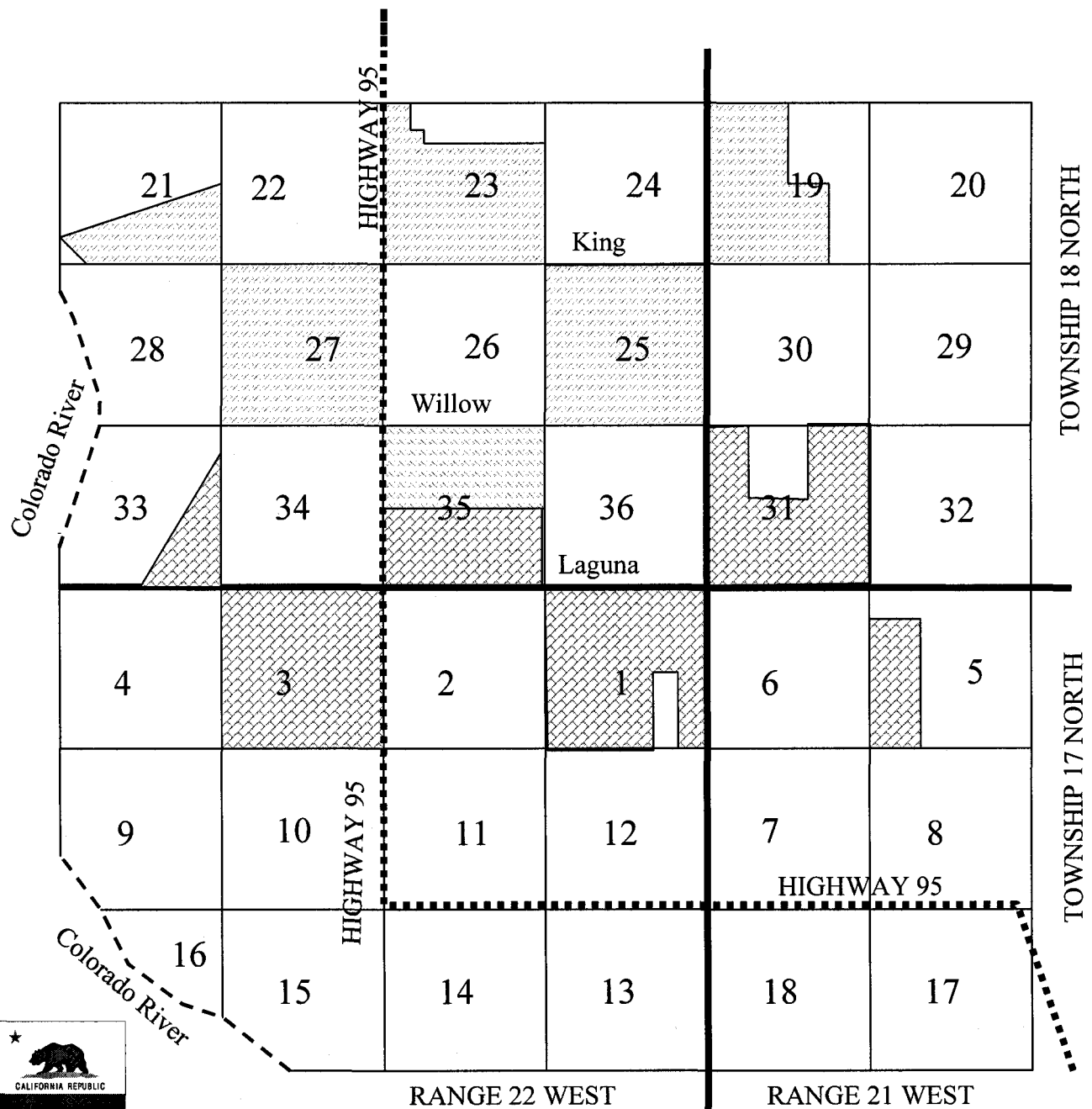
Backflow Prevention Tariff

Lagoon Estates has an appropriate backflow prevention tariff on file with the Commission

Meter and Service Line Installation Fees

The Company has requested to change its meter and service line charges. These charges are advances, refundable *in toto*, and the Company's proposed charges are within Staff's experience of reasonable and customary charges. Staff recommends adoption of the Company's proposed meter and service line charges.

LAGOON ESTATES WATER COMPANY CERTIFICATED AREA



Lagoon Estates Water Co.



Willow Valley Water Co.

Exhibit 1

UNIT 4 WELL
DWR 55-618835
Contains two pumps in single casing

LAGOON ESTATES
WATER COMPANY
(System ID # 08-021)

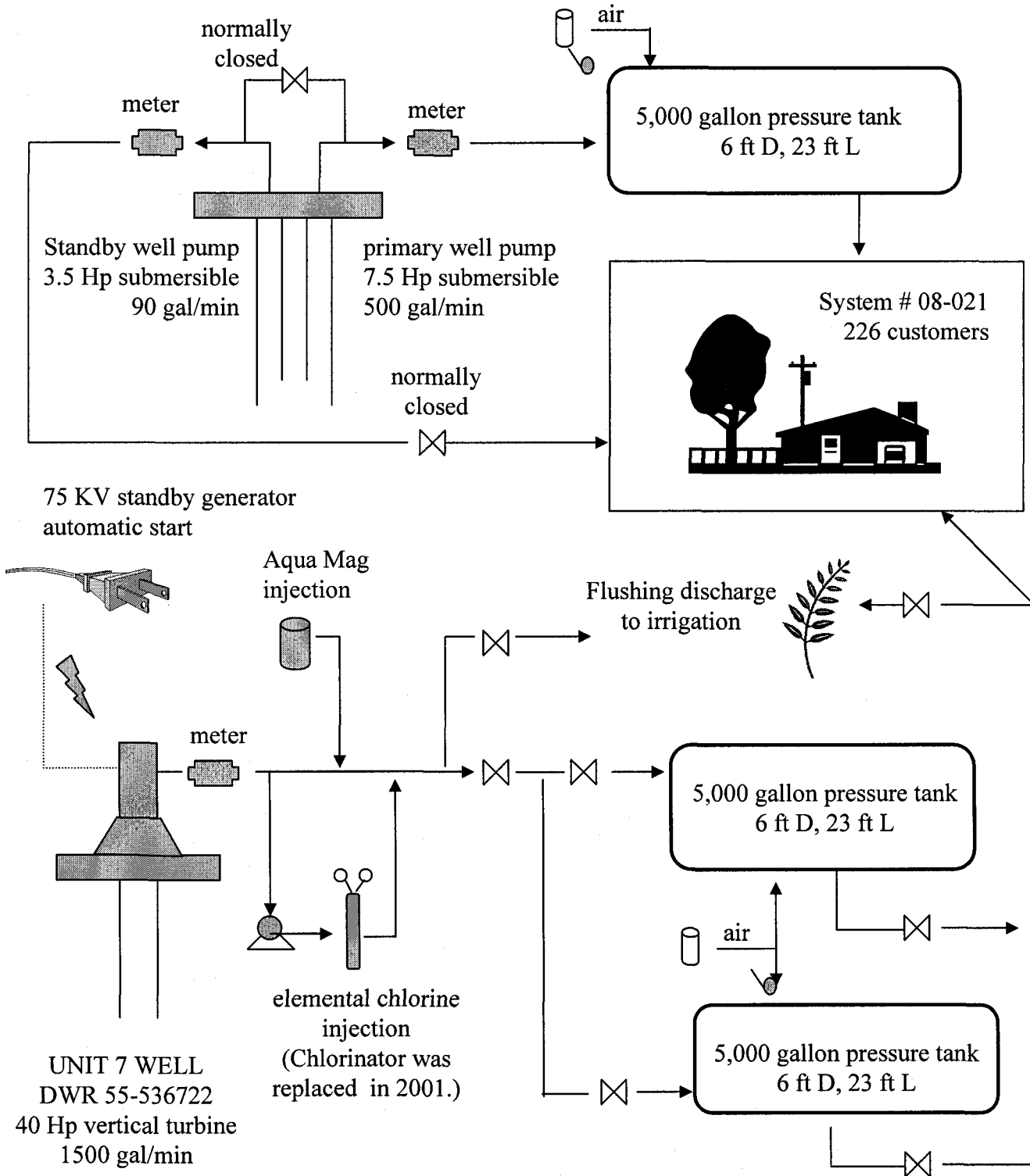


Figure 2 A

LAGOON ESTATES WATER COMPANY

(System ID # 08-046)

UNIT 2 WELLS

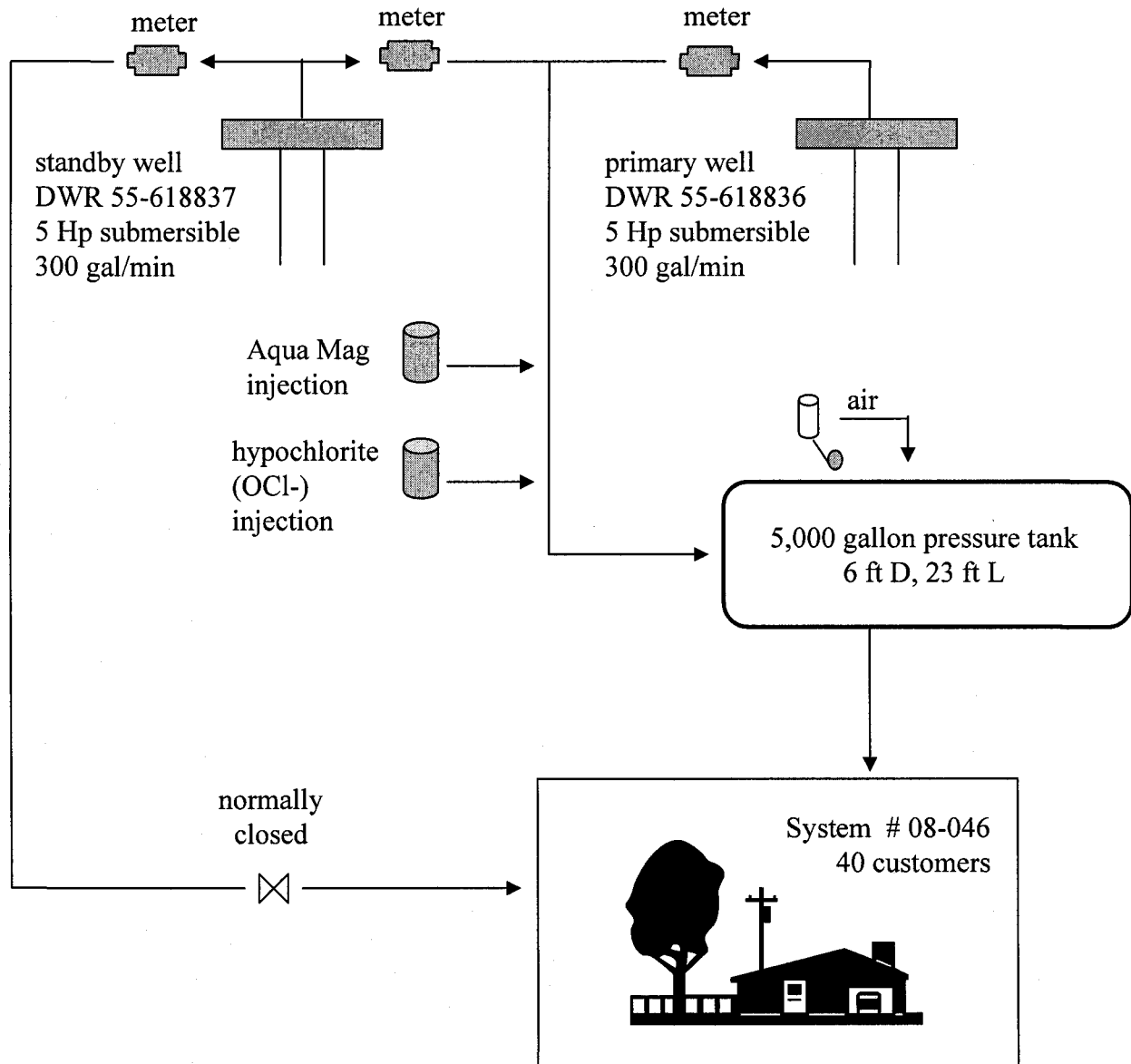


Exhibit 2 B

MEMORADUM

TO: James Dorf
Chief of Finance and Regulatory Analysis
Utilities Division

FROM: Alfonso Amezcua *af*
Public Utilities Consumer Analyst I
Utilities Division

THRU: Connie Walczak *aw*
Consumer Services Supervisor
Utilities Division

DATE: November 16, 2004

RE: LAGOON ESTATES WATER COMPANY
DOCKET NO. W-01825A-04-0546

COMPANY HISTORY

Lagoon Estates Water Company ("Company") was granted a Certificate of Convenience and Necessity ("CC&N"), to provide water utility to the public in an area near the Colorado River, about 20 miles south of bullhead City and 12 miles north of Golden Shores and the Topock Marsh in Arizona, pursuant to authority granted by the Arizona Corporation Commission ("Commission") in Decision No. 33753 (March 12, 1962). The current rates have been in effect since May 1, 2000 per Decision No. 62508. The Company was incorporated May 16, 1977. Per the current Annual Report, the Lagoon Estates Water Company serves 260 customers.

Lagoon Estates Water Company is an Arizona Domestic Corporation. The Records Section of the Corporations Division was contacted on November 8, 2004 and indicated that the Company was not in good standing. The Records Section has since indicated that as of November 15, 2004 the Company filed necessary documents with the Annual Report Section to bring it into good standing.

COMPLAINT HISTORY

A search of Consumer Services complaint records revealed the following history of customer complaints:

2001 - Zero complaints, two inquiries (one-billing, one-new service issues), and zero opinions.

2002 - Zero complaints, one inquiry (quality of service), and zero opinions.

2003 - Zero complaints, zero inquiries, and zero opinions.

2004 - Zero complaints, zero inquiries, two opinions (one-quality of service, one-opposed to the rate increase).

CONSUMER SERVICES TARIFF AND RULE RECOMMENDATIONS

Lagoon Estates Water Company has an approved Cross-Connection/Backflow Tariff, and has filed a Curtailment Plan with this application.

CONSUMER SERVICES COMMENTS

According to a sample bill rendered by the Company, the bill complies with ACC R14-2-409.B.2.

Consumer Services received a copy of the public notice the Company sent to its customers regarding this application for rate increase. To date, the Commission has received one phone call from Lagoon Estates Water Company customers in response to this notice.

There have been no intervention requests for this case.

MISCELLANEOUS

Due to the response received from Lagoon Estates Water Company customers, a Public Comment meeting was not scheduled.

Cc: Lyndon Hammon, Engineering
File